

### TYPICAL APPLICATIONS

- Individual Control of Fluorescents
- T-5 or T-8 Fluorescent
- HID Bi-Level (w/ -SH option)

### FEATURES

- PIR Occupancy Detection
- Up to 45 Foot Mounting
- Self-Contained Relay, no Power Pack needed
- No Minimum Load Requirements
- Push-Button Programmable
- Time Delay: 30 sec. to 20 minutes
- Green LED Activity Indicator
- 100 Hr. Lamp Burn-in Timer Mode

### DAYLIGHTING OPTIONS

- Up-Looking On/Off Photocell (-P)
- Down-Looking On/Off Photocell (-PD)

### SPECIFICATIONS

- Size: 3.625" x 3.625" x 1.25" Deep (9.2 cm x 9.2 cm x 3.2 cm Deep)
  - Sensor Weight: 7 Ounces
  - Sensor Color: White
  - Mounting: 1/2 inch knockout
  - Relative Humidity: 20 to 90% non-condensing
  - Operating Temp: 14° to 160° F (-10° to 71° C)
  - Storage Temp: -14° to 160° F (-26° to 71° C)
  - Load Rating (1 Phase Only):  
120 VAC @ 800 W  
277 VAC @ 1200 W  
347 VAC @ 1500 W
  - 1/4 HP Motor Load
  - Frequency: 50/60 Hz (Timers are 1.2 times for 50 Hz)
  - UL, CUL, and Title 24 Compliant
  - 5 Year Warranty
  - Made in U.S.A.
- ### LOW TEMP/HI HUMIDITY(-LT)
- Conformally coated Circuit Board is corrosion resistant from moisture
  - Operates down to -40° F (-40° C)

## CMRB-6 Series w/ Enhanced Daylighting Options!



High Bay Lighting Control is made simple with the **CMRB-6 Series** Passive Infrared (PIR) occupancy sensor! This self contained unit is line powered and can switch a large range of line voltages directly without the need for a Power Pack. The **CMRB-6** mounts directly to the end of a fluorescent fixture through an extended 1/2 inch chase nipple, and is keyed to easily mount through a half inch knockout. With mounting heights up to 45 Feet, this sensor is perfect for High Bay Lighting Controls. High humidity or cold damp environments are accommodated by the optional "-LT" version. In applications with abundant natural light, consider adding the -P or -PD daylighting control option.

### START-TO-HIGH OPTION w/ HID BI-LEVEL FIXTURES (CMRB-6-SH)

HID Bi-Level fixtures must be controlled by line voltage and provide their own interposing relay for switching the capacitor in the ballast from "High" to "Low". For these applications, the **CMRB-6** has a Start to High (-SH) option that must be used. This option provides a timer (factory set at 20 minutes) that acts as a warm-up period for the HID lamps. The sensor also offers a 100 hour lamp burn-in timer. Once engaged, the sensor goes to an "On" state for the 100 hours. If power is interrupted, the sensor will continue with the 100 hour countdown when power is restored. Once expired, this feature is automatically removed unless engaged again. During the Start-to-High period or the 100 Hr burn period, the LED flashes continuously indicating that the sensor is in an override "On" state. This feature allows HID lamps to "burn-in" and reach full color and light output. If a lamp is replaced, it is suggested to reengage this feature.

### SENSOR OPERATIONS

The sensor detects changes in the infrared energy given off by occupants as they move within the field-of-view. When occupancy is detected, a self-contained relay switches the lighting "On". The sensor is line powered and can switch a large range of line voltages. An internal timer, factory set at 10 minutes, keeps the lights "On" during brief periods of no activity. This timer is selectable at 2.5 minute increments from 30 seconds to 20 minutes, and is reset every time occupancy is re-detected. This state-of-the-art design requires no manual field adjustments.

### DAYLIGHTING CONTROL OPTIONS (-P & -PD)

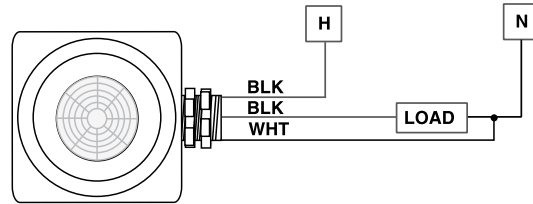
For spaces with abundant natural light from windows or skylights, this series offers two On/Off Photocell options. As the daylight levels change, both options insure that an adequate light level is maintained according to a programmable set-point value. The **Up-Looking On/Off Photocell (-P)** option is ideal for skylight applications as the Photocell views through the back of the sensor (towards the ceiling and skylights). The -P option operates "open loop" as it can not view the lights it is controlling. Conversely, the **Down-Looking On/Off Photocell (-PD)** option looks down through the sensor's lens and therefore can view the lights it is controlling. This is more applicable for areas where daylight is coming in through High Bay garage doors or windows below the level of the sensor. For more detailed information on these daylighting control features, see the **CMRB-PC** Technical Data Sheet.

**Model Numbering System: CMRB-6-[DAYLIGHTING CONTROL]-[START-TO-HIGH]-[VOLTAGE]-[TEMP/HUMIDITY]**

MODEL#	DAYLIGHTING CONTROL	START-TO-HIGH	VOLTAGE	TEMP/HUMIDITY
CMRB-6	Blank = None -P = Up-Looking On/Off Photocell -PD = Down-Looking On/Off Photocell	Blank = No STH -SH = w/STH	Blank = 120-277 VAC -3 = 347 VAC	Blank = 14° to 160° F -LT = -40° to 160° F
FB-1	Mounting Bracket for Deep Fixtures			

**TYPICAL WIRING DIAGRAM (DO NOT WIRE HOT)**

The sensor uses Sensor Switch's patented "either/or wiring"; Black to Hot and Black to Load. The White wire connects to neutral. Black wires are replaced with Red wires for 347 VAC.



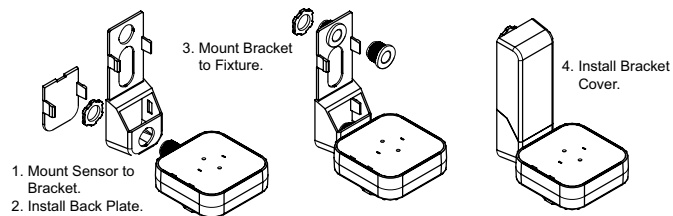
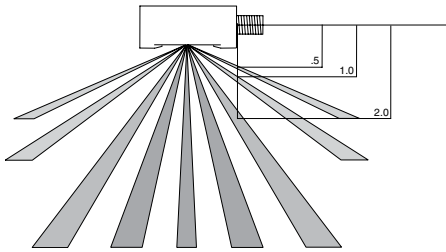
**INITIAL POWER UP**

When power is applied to the sensor, the relay is designed to be in a latched closed position, and the lights should come on. After a 1-3 minute warm-up period, the sensor becomes functional and begins to "time out". **If the Lights Do Not Immediately Turn On (Initial Installation Only)** the latching relay is in the open position. When the 1-3 minute warm-up is over the sensor will correct itself and close the relay.

**3 MINUTE WARM-UP**

**TYPICAL MOUNTING**

The CMRB-6 mounts in an half-inch knockout hole on the side of a fixture. The sensor's field-of-view may be partially blocked by the fixture housing; refer to drawing below, dimensions shown are in inches, to ensure proper clearance. At High Mounting Heights, the outer beams are not used, and therefore as long as the sensor is mounted within 1.75 inches from the bottom of the fixture, the sensor's view will not be impaired. With deep fixtures, use the FB-1 Fixture Bracket as shown.



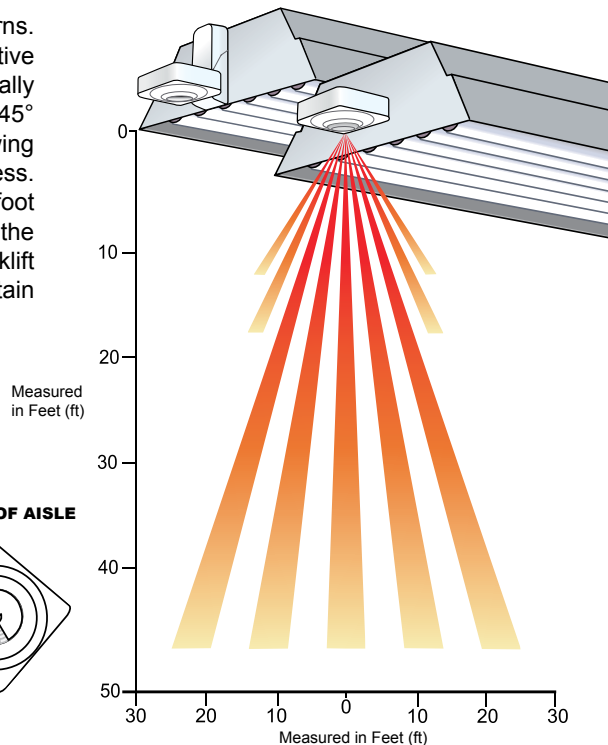
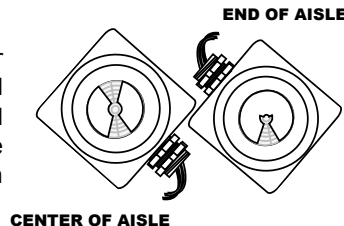
**FIELD OF VIEW**

The CMRB-6 lens views in 5 separate 360° coneshaped patterns. The outermost (fifth) cone viewing at a 54° angle is only effective up to a 12-15 foot mounting height and is therefore not typically considered in High Bay applications. The fourth cone views at a 45° angle and is effective up to 20 feet. The inner three cones viewing at a maximum 30° angle continually maintain their effectiveness. The geometric effect is that the CMRB-6 maintains a 15 to 20 foot radius up to a 35 foot mounting height. From 35 to 45 feet, the CMRB-6 will generally only detect major motions such as a forklift truck. However, in colder environments, the CMRB-6 may maintain very sensitive detection in all cones up to greater heights.

**Note:** Heat producing sources controlled by the sensor must not be in the view pattern of the sensor. Symptom: Sensor cycles or appears to continually stay "On". Solution: Move sensor or mask lens segments that view the source.

**MASKING KIT**

The sensor views a 360° circular pattern. The kit provided may be used to mask off half of the viewing for end of aisle applications, or trim the side viewing to create a rectangular pattern for center of aisle applications.



**WARRANTY:** Sensor Switch, Inc. warrants these products to be free of defects in manufacture and workmanship for a period of sixty months. Sensor Switch, Inc., upon prompt notice of such defect will, at its option, provide a Returned Material Authorization number and a replacement product. **LIMITATIONS AND EXCLUSIONS:** This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch, Inc. be liable for any incidental or consequential property damages or losses.